

What I claim as my invention is:

1. A multi-purpose hand held sprayer having a vertical shut-off valve which comprises:

a controller regulating flow of the fluid and having an elongate body incorporating a vertical shut-off valve, an inlet including a coupler for communication with a pressurized fluid source, an outlet including an opening having an adapter arranged with multiple sizes of diameters for a quick connection, a channel that internally links for flow of the fluid from said inlet to said outlet through said vertical shut-off valve, and an exterior having a slim body for a hand grip and a contour on said body for being placed in a holder;

an extension bar carrying the fluid to a distant area and having a body being formed with a tubular shape, an inlet including an adapter arranged with multiple sizes of diameters for a quick connection to said outlet of controller, an outlet including an adapter arranged with multiple sizes of diameters for a quick connection, O-rings on said inlet and said outlet for a quick connection to afford sealing and friction, a channel that internally links for flow of the fluid from said inlet to said outlet and said outlet for spouting the fluid in a single stream, and an exterior contour on said body for being placed in a holder;

a spray tip performing distribution of the fluid in the air and having a body curved at various angles, an inlet including an adapter arranged with multiple sizes of diameters for a quick connection to said outlet of said extension bar, an outlet opening for releasing fluid having an internal base for placing an O-ring, a cover plate for said outlet opening contained various sizes and patterns of small holes for fine multiple streams of fluid, an O-ring placed in said outlet opening for said cover plate to seal, a chamber at said inlet offering a buffer for an occurrence that said inlet is not aligned with said outlet of said extension bar, a channel that internally links from said inlet through said chamber to said outlet.

2. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 1 wherein said vertical shut-off valve comprises:

- a housing having a body including a lower chamber for input of pressurized fluid and an upper chamber for output of released fluid, an opening in said body locating above said upper chamber, a channel that links from said opening to upper chamber for a stem assembly passed through, an O-ring in said opening for sealing said channel, a top cover for said opening to apply pressures to said O-ring, a hollow in said opening for placing said O-ring to support sealing, an inlet opening in said lower chamber leading to said inlet of controller, an outlet opening in said upper chamber leading to said outlet of controller, a seat secured to said body between said lower chamber and said upper chamber, an O-ring for sealing said seat, a bottom cover for securing said lower chamber, an O-ring for sealing said bottom cover, a compression spring urging said stem assembly in a closed position located on said bottom cover;
  - a stem assembly being manually movable for controlling the fluid flowing from said lower chamber to said upper chamber;
  - a pushbutton assembly having a body including a hole for placing onto an upper member of said stem assembly, a locknut for securing said body to said upper member of stem assembly, an opening in said body for placing said locknut, a finish plug for covering said opening, and a groove in said opening for placing said finish plug.
3. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 2 wherein said stem assembly comprises:
- an O-ring having a round hole in the middle, which is made of elastic material;
  - an upper member having a body extended to the outside of said controller for manual operation, a thread located on one end for placing said locknut in said pushbutton assembly, a shoulder for placing said body of pushbutton assembly, a shaft formulating a longitudinal, cylindrical, and slim outer shape with smooth surface for supporting a good sealing and having larger thickness than that of said shoulder to keep said pushbutton in the place, a flange located on the other end formulating a round disk for placing to fit into a large opening of said seat, a groove on said flange for placing said O-ring, and an opening for a fastener threaded internally from one end of said flange toward the said shaft;

a base plate having a body forming a round disk shape for absorbing inlet fluid pressures to deliver to said O-ring having a groove for placing said O-ring on one side, a protrude in the middle of the other side for placing said compression spring, and an opening in the center for a fastener run through from the middle of said protrude to the other side of said body;

a fastener to secure said O-ring placed between said upper member and said base plate, forming a solitary piece of said stem assembly for movement in said housing.

4. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 2 wherein said body of housing is being infused into said body of controller by means of composing internal structure of said vertical shut-off valve into said body of controller, making a solitary formation.

5. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 2 wherein said seat comprises:

a lip formulated a round smooth surface for good engagement with said O-ring of said stem assembly;

an opening having two sizes of diameters aligned in the middle for a passage of said stem assembly and the released fluid;

a polygon shape of said opening with a first small size diameter for a tool;

a round shape of said opening with a second large size of diameter for placing said upper member of stem assembly;

a flange on the outside of said seat for securing said O-ring to seal.

6. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 2 wherein said top cover comprises an opening in the middle for said stem assembly passed through, a hollow for placing said O-ring to support sealing against said shaft of stem assembly, a body including a thread to secure to said housing body, and means on said body for facilitating to adjust pressures applied on said O-ring.

7. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 2 wherein said bottom cover comprises a body including a thread to secure to said body of housing, a concave located in the middle for placing said

compression spring to prevent misplacement, means on said body for facilitating to secure.

8. A multi-purpose hand sprayer having a vertical shut-off valve according to claim 6 and claim 7 wherein said means include various shapes including a polygon and any surface natures on said body including cross lines for facilitating to secure.

9. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 2 wherein the components of said vertical shut-off valve are preferably made of corrosion resistant material for longer usages.

10. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 3 wherein said O-ring of said stem assembly is enclosed in said grooves in such a way that the exposed width for engagement with said seat is not greater than the thickness of said O-ring to prevent displacement.

11. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 1 wherein said extension bar comprises a body having a slim and long shape to be placed in the limited space.

12. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 1 wherein said spray tip comprises a body having a slim shape with rounded end to be placed in the limited space.

13. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 1 wherein said O-rings made of elastic material for good sealing and friction.

14. A multi-purpose hand held sprayer having a vertical shut-off valve according to claim 1 wherein said quick connection is defined as coupling of an outlet of first member to an inlet of second member with sliding motion.